

Subject.

Day.

Month.

Year.

1st Feb

2020

1000

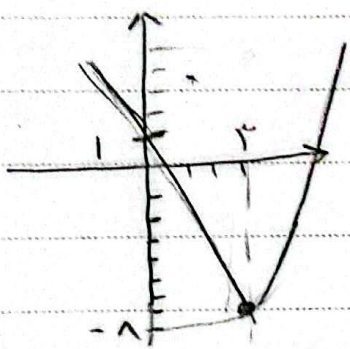
(1)

a) ext min. $\begin{cases} x = \frac{\epsilon}{\lambda} = 1 \\ y = \frac{14 - \lambda}{-\lambda} = -\frac{1}{\lambda} \end{cases}$

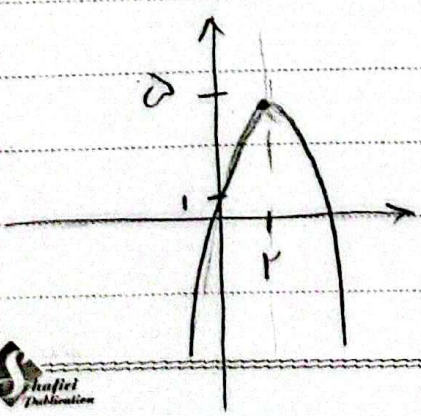
b) ext max $\begin{cases} x = \frac{10}{\lambda} \\ y = \frac{9 - \epsilon_0}{\lambda} = -\frac{10}{\lambda} \end{cases}$

(2)

a) ext min $\begin{cases} x = \frac{4}{\lambda} = 2 \\ y = \frac{14 - \epsilon}{-\lambda} = -\lambda \end{cases}$



b) ext max $\begin{cases} x = \frac{\epsilon}{4} = 1 \\ y = \frac{14 + \epsilon}{\epsilon} = 2 \end{cases}$



Subject.....

Day..... Month..... Year.....

$$m^r - m - r = \epsilon m^r + k m^r - q m - r \quad (1)$$

$$\epsilon m^r + (k-1) m^r - m - r = (m^r - m - r) m$$

$$r m^r + k m^r - q m \stackrel{-m}{\Rightarrow} r m^r + k m - q = m^r - m - r$$

$$r m^r + (k+1) m - \epsilon = m^r - m - r$$

$$\cancel{m^r} + (k+r) m - r = \cancel{m^r} - m - r$$

$$k+r = 0 \quad \boxed{k = -r}$$

$$\sqrt{\beta} - \sqrt{\alpha} = 1 \quad (2)$$

$$\sqrt{m} = 1 \Rightarrow m = 1$$

$$\frac{\beta + \alpha}{r m} - \frac{r \sqrt{\alpha \beta}}{m} = 1$$

$$r m - r \sqrt{m} = 1 \Rightarrow r \sqrt{m} - r \sqrt{m} - 1 = 1$$

$$t = \frac{1}{\sqrt{m}} - \frac{1}{\sqrt{m}}$$

$$p = \frac{-m}{r} = -\frac{1}{r}$$

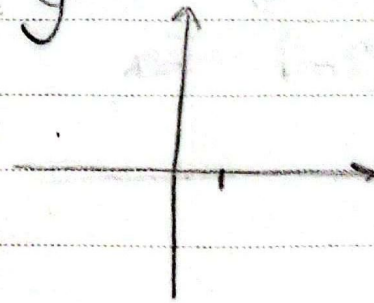
Subject.....

Day..... Month..... Year.....

$$r m^r + (-m - r) m + m = y \quad (2)$$

$$a = 1 - \frac{m}{r}$$

$$\frac{r-m}{r}$$



$$\frac{1 - \frac{m}{r} x^m}{1 - x} = \frac{r}{r-x}$$

$$\frac{r m^r}{r} = \frac{r}{r-x}$$

$$r m - m^r = r \Rightarrow m^r - r m + r = 0$$
$$m = + r \sqrt{-1}$$

$$\frac{-b}{r a} = \frac{h}{r} = \frac{r}{r} \sqrt{-1} - \frac{1}{r}$$

b min ϵ_0^-

a) =

(4)

$$\frac{r - \epsilon a^r}{-\epsilon a} = \frac{v}{1}$$

$$\frac{\epsilon a^r - r}{\epsilon a} = \frac{v}{A r}$$

$$A a^r - v = v a$$

$$v \pm \sqrt{\epsilon a^r + 19 r^2 \epsilon}$$

$$\leftarrow A a^r - v a - v = 0$$

19

$$\frac{v \pm \sqrt{r \epsilon}}{19}$$

$$\frac{r \epsilon}{19}$$

Subject

Day. Month. Year

$$\sqrt{(a+1)^r - \epsilon a} = r \quad (\vee)$$

$$\sqrt{a^r + ra + 1 - \epsilon a} = r$$

$$a^r - 1 = \dots$$

↘ +1

$$\sqrt{a^r - ra + 1} = r$$

$$a^r - \epsilon a + r = \dots$$

↙ ↘ r

$$\sqrt{(a-1)^r} = r$$

$$a-1 = r \quad \vee \quad a-1 = -r$$

$$a = r \quad \text{---} \quad a = \textcircled{-1} \rightarrow \text{JEE}$$

$$\sqrt{(ra+1)^r - \epsilon b} = r$$

$$\sqrt{1.. - \epsilon b} = r$$

$$a^r - 1 \cdot a + r\epsilon = y$$

↙

rε

$$1.. - \epsilon b = \epsilon$$

$$r\epsilon = \epsilon b$$

$$r\epsilon = b$$

$$r\epsilon - r^u = r1$$

$$S = \begin{cases} m_s = \frac{ra}{ra} = \frac{1}{r} \\ y_s = \frac{a^r + ra}{ra} = \frac{a+1}{\epsilon} \end{cases} \quad (\wedge)$$

Subject: $\frac{b^r + ab}{\epsilon}$ = $\frac{b-r}{\epsilon}$
 Day: Month: Year:

$$\frac{a+r}{\epsilon} = \frac{b}{r} + \frac{b}{r} - 1$$

$$a = -14$$

$$\frac{-a}{14} + \frac{a}{\epsilon} + r = \frac{b}{\epsilon} + r$$

$$-\frac{a}{\epsilon} = b - a$$

$$r = b - a$$

(9)

$$P = \frac{\beta}{r\alpha} \Rightarrow r\alpha\beta - 1 = \dots$$

$$\alpha = \frac{1}{\alpha} - \frac{1}{\alpha}$$

$$\frac{-r}{r\alpha} = \alpha + \beta \rightarrow \frac{-\epsilon}{\alpha} = \frac{1}{\alpha} + \beta$$

$$-1 = \frac{-\alpha}{\alpha} - \beta$$

$$\frac{+\epsilon}{\alpha} = -\frac{1}{\alpha} + \beta \Rightarrow \beta = 1$$

$$\beta > \alpha \Rightarrow \beta = 1, \alpha = -\frac{1}{\alpha}$$

$$-\alpha n^r + \epsilon n + 1 = y$$

$$S = \int \frac{a + \epsilon}{10}$$

$$y = \frac{14 + r}{+ r}$$

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subject.....

Day..... Month..... Year.....

$$S = a^r + b^r - 1r \Rightarrow$$

$$a + b = a^r + b^r - 1r \quad (1)$$

$$a^r - a + b^r - b - 1r = 0$$

$$0 = (a - r)(a + r) + (b - r)(b + r)$$

↓

$$a = r \quad b = r$$

$$a + b = 4r$$